

S/017/0001
cc: Wayne
Task: 4659



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December 16, 2011

via Electronic Mail (waynewestern@utah.gov)

Mr. Wayne Western
Utah Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84118

RECEIVED

DEC 20 2011

DIV. OF OIL, GAS & MINING

Re: Reclamation Plan and Reclamation Cost Update for the Ticaboo Stockpile Removal Project S/017/0001, Garfield County, Utah

Ucolo Exploration Corporation (UCOLO) has requested that Enviroscientists, Inc. (Enviroscientists), as environmental consultants to UCOLO, to prepare and submit on their behalf the following reclamation plan as well as an updated site-specific reclamation cost (Update) for the Ticaboo Stockpile Removal Project S/017/0001 (Project) located in Garfield County, Utah. This Update has been requested by the State of Utah Department of Natural Resources Division of Oil, Gas, and Mining (DOGM) in order to maintain an active status for the Project.

The Project consists of stockpiles located on public lands administered by the Bureau of Land Management Henry Mountain Field Station (BLM) in Section 21, Township 35 South, Range 11 East (T35S, R11E), Salt Lake Base and Meridian (SLB&M), Garfield County, Utah (Project Area). Access to the Project Area is via State Highway 276 north of Ticaboo and then west and north along the Shootaring Creek Road, an improved dirt road.

The Project consists of removing stockpiles, which consist of mineralized material, for the purpose of extracting uranium. Upon obtaining a milling agreement, UCOLO will load highway-rated tractor trailers using a Caterpillar 980 loader, or equivalent equipment, and will truck the material to an off-site processing facility. After the stockpile material has been removed, the site will be ripped and reseeded. Additionally, there is approximately 0.30 acre of road disturbance that is associated with accessing the stockpile.

Under the 2008 Plan, the Project was estimated to be completed by summer 2011. However; the Project schedule has been significantly impacted due to the currently unfavorable economic condition for uranium sales and has not progressed since the Plan was approved. UCOLO estimates that it may still be several years before the Project is economically feasible and a buyer for the stockpiled material is secured. This Update was requested by DOGM to be submitted to

include description of the stockpile reclamation should the material not be removed from the current site location.

Reclamation Plan

Reclamation will be completed to the standards described in 43 CFR 3809.420. Reclamation will meet the reclamation objectives as outlined in the U.S. Department of Interior Solid Minerals Reclamation Handbook #H-3042-1 (BLM 1992), and Surface Management of Mining Operations (NSO) Handbook H-3809-1 (BLM 1989). All UCOLO overland travel, road construction, and stockpile area will be recontoured and reseeded.

Reclamation will be designed to achieve post-mining land uses consistent with the BLM's land use management plans for the area, which are outlined in the Henry Mountain Management Framework Plan (BLM 1982). Reclamation is intended to return disturbed land to a level of productivity comparable to pre-mining levels. Post-mining land use includes wildlife habitat, livestock grazing, hunting, and dispersed recreation. The post-mining land use is not expected to differ from pre-exploration land use.

After stockpile removal activities are completed, reclamation will involve regrading disturbed areas related to this Project to their approximate original contour and seeding using the approved reclamation seed mixture and application rates provided by the BLM (Table 2). The constructed road (0.30 acre) will be recontoured, ripped and seeded. Yearly visits to the site will be conducted to monitor the success of the revegetation for a period of three years or until revegetation success has been achieved.

The general technique for reclamation will be to cover the stockpile with a sufficient thickness of growth media and reseed the areas. UCOLO conducted an auger drilling program in October 2008. The data from this drilling program was used to analyze the continuity of the stockpile material and determined that the stockpile is currently in a stable configuration. The stockpile has a disturbance footprint of approximately 2.90 acres. The total surface disturbance associated with the Project is approximately 3.20 acres.

Growth Media Placement

Growth media will be borrowed from an area located approximately 50 feet south of the ore stockpile, which is shown on Figure 2. Upon final reclamation, the growth media will be placed over the surface of the stockpile. Before placement of the growth media, the stockpile surface will be roughened by ripping or discing to ensure good contact. Material from the growth media stockpile would be transferred using a scraper, which would then place the growth media on the stockpile. This process would continue until approximately 24 inches of growth media has been placed on the stockpiles. The controlled dozer tracking may be performed during placement of the growth media to roughen the surface, lightly compact the material, increase water retention, and aid in erosion prevention. The bulldozer would then be used to finish off the cover placement and to insure that the borrow area slopes are stabilized at 3:1 or less. At this time, UCOLO assumes that no soil amendments will be included in the reclamation bond cost estimate.

Seeding Methods

All reclaimed surfaces will be revegetated to manage runoff, reduce erosion, and provide forage for wildlife and livestock, and reduce visual impacts. Seed would be applied with a mechanical broadcaster and harrow. Seedbed preparation and seeding would take place in the fall after grading and redistribution of growth media. The BLM-approved seed mix is shown in Table 2.

Table 2: Proposed Seed Mix

| Species | | Application Rate (lbs PLS ¹ /acre) |
|---------------------|-------------------------------|--|
| Common Name | Scientific Name | |
| Shadscale | <i>Atriplex confertifolia</i> | 2.00 |
| Four-wing saltbrush | <i>Atriplex canescens</i> | 4.00 |
| Desert spinach | <i>Atriplex polycarpa</i> | 3.00 |
| Quail brush | <i>Atriplex lentiformis</i> | 3.00 |
| White bursage | <i>Ambrosia dumosa</i> | 1.00 |
| Desert globemallow | <i>Sphaeralcea ambigua</i> | 0.50 |
| Palmer's phacelia | <i>Phacelia palmeri</i> | 0.50 |
| Total | | 14.00 |

¹Pure Live Seed

The seed list, provided by the BLM (Table 2), is designed to promote plant species that can exist in the environment of southern Utah, are proven species for revegetation, or are native species found in the plant communities prior to disturbance. Broadcast seeding will be at a rate of approximately 14.00 pounds per acre. Changes or adjustments to the reclamation plant list or application rate will be completed in consultation with and approval from the BLM and the DOGM. The seed mixture will be certified pure live seed and weed free. Straw bales used for erosion control will also be certified as weed free.

Control of Undesirable Species

To prevent and control the introduction and spread of noxious weeds within the Project Area during reclamation activities, UCOLO will implement the following prevention and control practices:

- Soil disturbance will be minimized to the extent practicable, consistent with Project objectives. Topsoil will be stockpiled and used in reclamation. The use of imported topsoil and non-organic materials will be avoided.
- Disturbed sites will be revegetated as soon as possible when Project activities are completed. Revegetation will include soil scarification, seeding, and weed-free mulching as necessary.
- The seed mixture will be certified pure live seed and weed free. Straw bales used for erosion control will also be certified as weed free.

Noxious weeds can readily invade disturbed areas associated with exploration projects. UCOLO will be responsible for the following: 1) identifying noxious weeds in the Project Area (booklets and pamphlets will be provided by the BLM); 2) excluding noxious weeds from disturbed areas

until reclamation has been accepted; and 3) insuring all equipment is “weed free” before traveling to and from the Project Area so that noxious weeds are not spread to new locations. When noxious weeds are encountered in the Project Area, documentation of their location and extent will be provided to the BLM as soon as possible. UCOLO will obtain approval from the BLM authorized officer prior to any herbicide application. UCOLO will contact the Henry Mountain Field Station’s noxious weed program lead regarding any issues concerning noxious weeds.

To minimize the introduction of noxious weeds into the Project Area, the following preventative measures will be implemented by UCOLO: 1) stay on existing roads to and from the mine site and in the Project Area, 2) use a certified weed-free seed mix during reclamation, 3) conduct concurrent reclamation when feasible, and 4) implement a weed monitoring and control program. UCOLO will survey the Project Area annually, as part of the revegetation success review, for invasive weed species. If a limited amount of weeds are discovered, they will be pulled, placed in a plastic bag, sealed, and disposed of properly. For more intensive infestations, UCOLO will consult with the BLM on containment or eradication measures.

Revegetation Scheduling

Reclamation activities will be timed to take advantage of optimal climatic conditions. Table 3 outlines the anticipated reclamation schedule on a monthly basis, which will be followed to achieve the reclamation goals set forth above.

Table 3: Anticipated Exploration Reclamation Schedule

| TECHNIQUES | Quarter | | | | Year(s) |
|------------|----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|--|
| | 1 st Jan.- Mar. | 2 nd April- June | 3 rd July- Sept. | 4 th Oct.- Dec. | |
| Regrading | | | | | Within 2 years of Project completion |
| Seeding | | | | | Within 2 years of Project completion |
| Monitoring | | | | | 3 years beyond regrading and reseeding |

Timing of revegetation activities is critically important to the overall success of the program. Seeding activities will be timed to take advantage of optimal climatic periods and will be coordinated with other reclamation activities. In general, earthwork and drainage control will be completed in the summer or early fall. Seedbed preparation will generally be completed in the fall, either concurrently with or immediately prior to seeding. Seeds will be sown in late fall to take advantage of winter and spring precipitation and optimum spring germination. Early spring seeding may be utilized for areas not seeded in the fall.

Reclamation Cost Estimate

UCOLO has attached an updated reclamation cost estimate for the 3.20 acres of Project-related surface disturbance that will require reclamation, as requested by DOGM. This reclamation cost estimate includes the costs associated with the placement of growth media from the nearby stockpile to the material stockpiles and the application of seed for revegetation. The Project is

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currently bonded with DOGM for \$6,000.00. The attached updated reclamation cost estimate totals \$10,482.00. Upon receiving concurrence from the DOGM and BLM that this reclamation cost estimate is sufficient, UCOLO will increase the existing bond accordingly. The enclosed figures show the location of the stockpile as well as the source for growth media.

Please provide Enviroscientists with a courtesy copy of all correspondences with UCOLO concerning the Project. Should you have any questions or require further information, please do not hesitate to call our office at (775) 826-8822.

Sincerely,

Enviroscientists, Inc.



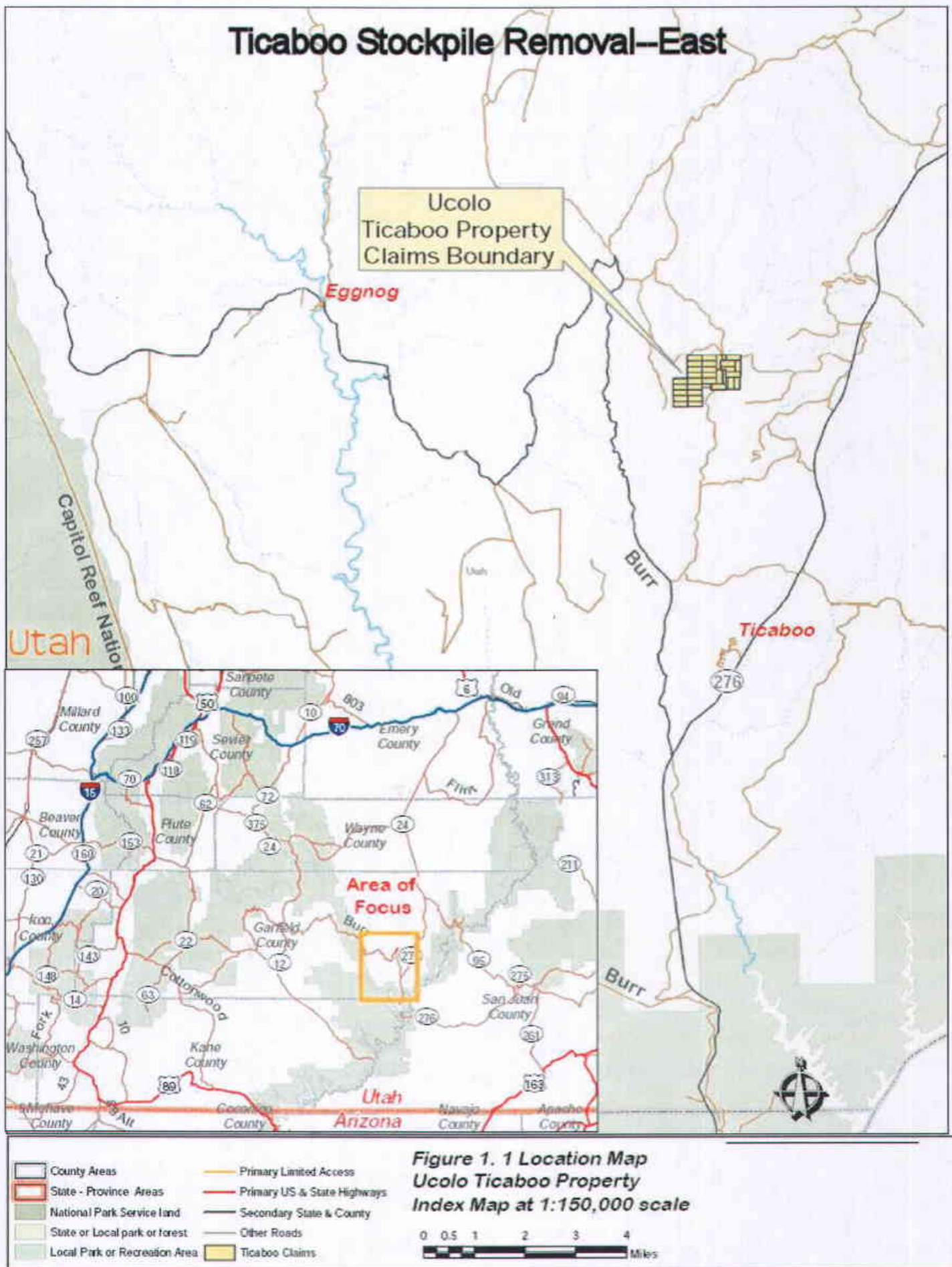
Kaitlin Sweet
Environmental Specialist

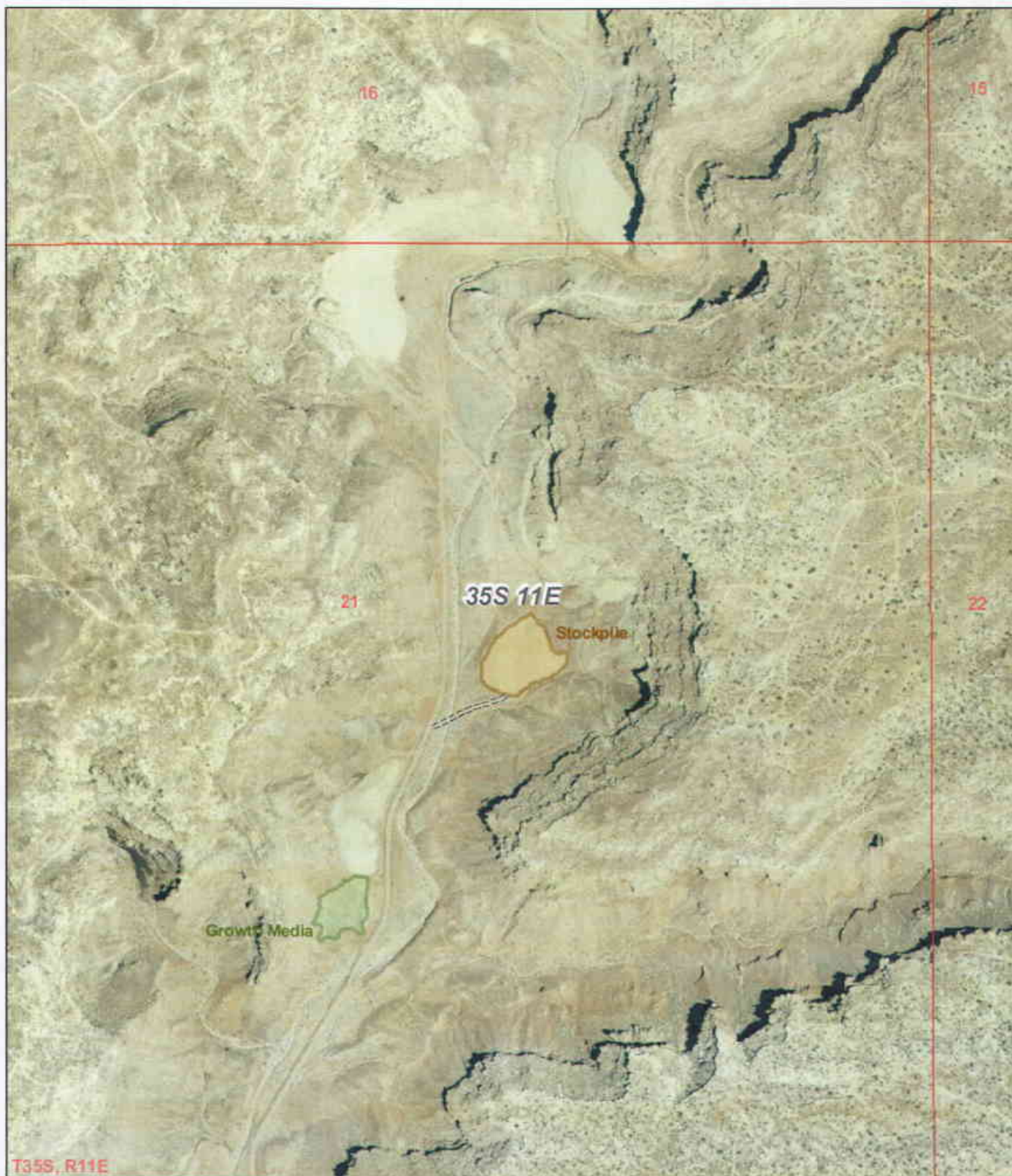
KCS:ns

Attachments: Figures and reclamation cost estimate

cc: BLM – Hanksville, Utah (w/attachments)
Todd Hilditch – UCOLO – Vancouver, B.C. (w/ attachments)

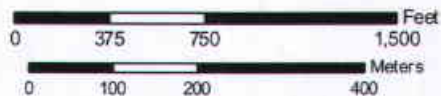
Ticaboo Stockpile Removal-East





Explanation

- Access Road (0.3 acre)
- Growth Media
- Stockpile (2.9 acres)



Contour Interval = 40 feet
Projection: NAD 1927, UTM Zone 12

UCOLO EXPLORATION CORP.

TICABOO PROJECT

Project Location and
Existing Disturbance

Figure 2

| | |
|---------------------------|----------------------|
| 10/9/07 | MTCSL |
| 12/19/2011 | 2/04 |
| 17043 17392 F&O Steelhead | Revised 12/17/11.mxd |



TICABOO PROJECT
UCOLO EXPLORATION CORPORATION
SITE-SPECIFIC RECLAMATION COST ESTIMATE - DECEMBER 2011

| Component/Activity | Labor (\$) | Equipment (\$) | Materials (\$) | Total (\$) |
|--------------------------------|----------------|----------------|----------------|-----------------|
| Road Reclamation | | | | |
| Regrading | \$13 | \$91 | | \$104 |
| Ripping | \$13 | \$91 | | \$104 |
| Seedbed Preparation | \$13 | \$91 | | \$104 |
| Seeding | \$11 | \$72 | \$63 | \$146 |
| Growth Medium Stockpile | | | | |
| Scarifying | \$51 | \$375 | | \$426 |
| Seeding | \$66 | \$432 | \$609 | \$1,107 |
| Additional Seeding (Two) | \$280 | \$1,940 | \$1,344 | \$3,564 |
| Post-Reclamation Monitoring | \$1,870 | \$658 | | \$2,528 |
| Mob/Demob | \$1,200 | \$1,200 | | \$2,400 |
| Grand Total | \$3,515 | \$4,951 | \$2,016 | \$10,482 |

I. Hourly Costs for Equipment and Labor

Hourly equipment operating rates were taken from Means Heavy Construction Cost Data, 2011.

Hourly labor rates are from U.S. Department of Labor, General Wage Determinations (<http://www.wdol/scafiles/davisbacon/UT79.dvb>).

Equipment

| | |
|--|-----------|
| Cat D9 Bulldozer/scrapper | \$91/hour |
| Chisel Tooth Harrow & Seed Drill (pulled by a Terex 82-30B tractor) | \$72/hour |

General Laborer

| | |
|--------------|----------------|
| Base Salary | \$10.92 |
| Total | \$10.92 |

Equipment Operator

| | |
|--------------|----------------|
| Base Salary | \$12.67 |
| Total | \$12.67 |

BLM Reclamation Technician (GS 7, Step 1)

| | |
|-----------------------|----------------|
| Base Salary | \$17.82 |
| Benefits (32%) | \$5.70 |
| Leave Surcharge (18%) | \$3.20 |
| Total | \$26.72 |

Seed Cost

| | |
|--------------------------|----------|
| Per Pound | \$15.00 |
| Per Acre (14.0 lbs/acre) | \$210.00 |

II. Reclamation Costs - Haul Road

Road Length - Total: 750 feet (0.14 mile)

II. A. Regrading Cost - Road

Reclamation Treatment: Regrade road disturbance to blend with surrounding topography

Assumptions: 750-foot dozing distance
750 feet x 12ft x 2 ft = 66 cubic yards of material moved

Equipment: Cat D9 @ \$91.00 per hour
Labor: Operator @ \$12.67 per hour

Average Production: 1,200 LCY/hr (750 feet dozing distance)

Correction Factors:

| | |
|------------------|------|
| Average operator | 0.5 |
| Loose material | 1.2 |
| Maneuverability | 1 |
| Job Efficiency | 0.83 |
| Grade (average) | 1 |

Average production (corrected) 1,200 LCY/hr x 0.5 x 0.83 x 1.2 = 600 LCY/hr

Hours and Cost 66 CY/600 LCY/hr = 1 (rounded up to whole hours)

1 hr x \$91.00/hr = \$91.00

1 hr x \$12.67/hr = \$12.67

| | | |
|-------------------|--------------|--------------|
| Regrading of road | Total | \$104 |
|-------------------|--------------|--------------|

II. B. Ripping Cost - Road

Reclamation Treatment: Rip exposed flat road bottom surface to relieve compaction.

Assumptions: Flat terrain, 12-foot width that will require ripping
Ripping to a depth of 6 inches
167 cubic yards of material

| | | |
|--|---|----------------------------------|
| Equipment: | Cat D9 @ | \$91.00 per hour |
| Labor: | Operator @ | \$12.67 per hour |
| Average Production: | 1,500 LCY/hr (Cat book Seismic Velocity Charts) | |
| Correction Factors: | Job Efficiency | 0.83 |
| Average Production (Corrected): | 1,500 LCY/hr x 0.83 = 1,245 LCY/hr | |
| Hours: | 167 CY/1,245 CY/hr = | 1.00 (rounded up to whole hours) |
| Cost: | 1 hr x \$91.00/hr = | \$91.00 |
| | 1 hr x \$12.67/hr = | \$12.67 |

| | | |
|-----------------------------------|--------------|--------------|
| Ripping Flat portion of haul road | Total | \$104 |
|-----------------------------------|--------------|--------------|

II. C. Seedbed Preparation Cost - Road

Reclamation Treatment: Scarify loose material to six inches deep.

Assumptions: 167 CY of material

| | | |
|--|----------------------------------|-------------------------------|
| Equipment: | Cat D9 @ | \$91.00 per hour |
| Labor: | Operator @ | \$12.67 per hour |
| Average Production: | 2,050 CY/hr | |
| Correction Factors: | Job Efficiency | 0.83 |
| Average Production (Corrected): | 2,050 CY/hr x 0.83 = 1,702 CY/hr | |
| Hours and Cost: | 167 CY/1,702 CY/hr = | 1 (rounded up to whole hours) |
| | 1 hr x \$91.00/hr = | \$91.00 |
| | 1 hr x \$12.67/hr = | \$12.67 |

| | | |
|--|--------------|--------------|
| Seedbed preparation for entire haul road | Total | \$104 |
|--|--------------|--------------|

II. D. Seed and Application Cost - Road

Reclamation Treatment: Distribution of seed mix by broadcasting.

Assumptions: 0.3 acre of road disturbance.
Broadcast application of seed by hand.

Material Cost: Seed Mix @ \$210/acre (hand broadcasting)

Average Production: Assume one manlabor crew
Seed mix dispersal of 0.5 acre per hour per laborer

| | | |
|----------------------------|-------------------------|------------------|
| Labor: | General Laborer @ | \$10.92 per hour |
| Materials and Cost: | 0.3 acre x \$210/acre = | \$63.00 |
| | 1 hr x \$72/hr = | \$72.00 |
| | 1 hr x \$10.92/hr = | \$10.92 |

| | | |
|--|--------------|--------------|
| Seed application costs for the haul road | Total | \$146 |
|--|--------------|--------------|

III. Reclamation Cost - Ore Stockpile

Assumptions: Estimated 3 acres of disturbance. Rip and regrade surface area.
Application of seed by hand.

Reclamation Treatment: Scarify loose material to six inches depth.
Hand broadcast seed.

III. A. Seedbed Preparation

Assumptions: 2.9 acres of disturbance.
Ripping depth of 18 inches

| | | |
|--|----------------------------------|------------------|
| Equipment: | Cat D9 @ | \$91.00 per hour |
| Labor: | Operator @ | \$12.67 per hour |
| Average Production: | 2,050 CY/hr (Cat Book) | |
| Correction Factors: | Job Efficiency | 0.83 |
| Average Production (corrected): | 2,050 CY/hr x 0.83 = 1,702 CY/hr | |
| Hours: | 7,018 CY/1,702 CY/hr = | 4 |
| Cost: | 4 hrs x \$91.00/hr = | \$375 |
| | 4 hrs x \$12.67/hr = | \$51 |

| | | |
|---------------------------------------|--------------|--------------|
| Seedbed preparation for the stockpile | Total | \$426 |
|---------------------------------------|--------------|--------------|

III. B. Seeding - Ore Stockpile

| | | |
|--|---|------------------|
| Material Cost: | Seed Mix @ \$210/acre (hand broadcasting) | |
| Average Production: | Assume one manlabor crew | |
| | Seed mix dispersal of 0.5 acre per hour per laborer | |
| Labor: | General Laborer @ | \$10.92 per hour |
| Materials and Cost: | 2.9 acres x \$210/acre = | \$609 |
| | 6 hrs x \$72/hr = | \$432 |
| | 6 hrs x \$10.92/hr = | \$65.52 |
| Seed application costs for the Stockpile | Total | \$1,107 |

IV. Additional Seeding

Assumptions: Road and ore stockpile will require two additional seeding to meet vegetation objectives.

| | | |
|--------------------|---------|---------|
| Labor: | \$280 | |
| Equipment: | \$1,940 | |
| Materials: | \$1,344 | |
| Additional Seeding | Total | \$3,564 |

V. Post-Reclamation Monitoring Costs

Assumptions: Semi-annual inspections for five years
10-hr work days for the first three years; 5-hour work days for the last 2 years
Approximately 8 mile round trip from Project to Hanksville, Utah.

| | | |
|------------|--|---------|
| Equipment: | 4-wheel drive pick-up truck @ \$50/day + \$0.55/mile | |
| Labor: | Reclamation technician @ \$26.72/hr | |
| Cost: | 7 days x (\$50/day +(80 miles x \$0.55/mile)) = | \$658 |
| | 7 days x 10 hrs/day x \$26.72/hr = | \$1,870 |

| | |
|---|---------|
| Post-Reclamation Monitoring Cost Estimate | \$2,528 |
|---|---------|

VI. Mob and Demob of Equipment

Assumptions: 2 hours required for mobilization from Hanksville, Utah, 4 hours total (mob + demob)
\$200/hr for each piece of equipment
3 pieces of equipment @ \$800/mob-demob =

| | | |
|-----------------|-------|---------|
| Mob-Demob Costs | Total | \$2,400 |
|-----------------|-------|---------|